

North Dakota Department of Environmental Quality

ANS Aquatic Nuisance Species

Emily Joynt, Environmental Scientist, North Dakota Department of Environmental Quality



Aquatic Nuisance Species (ANS), also known as Aquatic Invasive Species, are plants, animals, and bacteria harmful to water bodies outside of areas they normally live. ANS can spread quickly, changing water body function and using up resources needed to support native species. Outside native ranges, ANS have no natural predators to keep populations in check.

Zebra mussels, for example, are bivalves (two hinged shells) native to Europe and Asia that unknowingly spread into water bodies throughout the United States, including North Dakota. Though small (roughly the size of a fingernail), they have power in numbers and can seriously impact water body health and economic and recreational value. Zebra mussels can survive in a wide range of conditions and live on different types of surfaces. In beach areas, they blanket rocks and swim ladders with their sharp shells, creating a hazard for swimmers. They clog irrigation piping and water intake structures causing pump failure, and damage boat engines and docks, resulting in costly repairs.

ANS and Water Quality

Healthy water bodies host a diverse community of living things. ANS disrupt water body functions and limit diversity by consuming food and resources otherwise available to native species. As water body conditions change, the ways we use the water, such as agriculture and recreation, also change.

Common carp are large (several feet and tens of pounds) fish native to Europe and Asia brought to the United States as a food stock in the mid-1800s. They live and reproduce in a wide range of conditions, spreading quickly through waterways. Where carp take over, water quality declines due to their feeding behavior. Carp are bottom-feeders, meaning they search along a lake, river or wetland bottom to find food. They uproot plants and stir up sediment, disturbing habitat and limiting water clarity. Less bottom vegetation means less habitat and food



Eurasian watermilfoil Image source: United States Geological Survey



Flowering rush Image source: North Dakota Game and Fish Department



Curly leaf pondweed Image source: North Dakota Game and Fish Department



Silver carp
Image source: North Dakota Game and Fish Department



Grass carp Image source: United States Fish and Wildlife Service



Bighead carp Image source: United States Geological Survey



Common carp Image source: United States Geological Survey



Zebra mussels Image source: North Dakota Game and Fish Department

for fish, waterfowl and other species and more sediment suspended in the water means less sunlight reaches plants. Bottom sediments also store nutrients cycling through water bodies. When resuspended, excess nutrients are released and can contribute to algae blooms.

ANS in North Dakota

Multiple ANS have reached North Dakota. The above images are ANS known to be present in at least one water body in the state.

Additional Aquatic Nuisance Species have been found in North Dakota.

Visit the North Dakota Game and Fish Department website at https://gf.nd.gov/ans/species to learn more.

Stop the Spread

ANS are extremely difficult to remove once they get into a water body. The key to controlling ANS is to prevent them from spreading in the first place. Many ANS move between waters unnoticed, being too small or hiding in equipment such as a bait bucket.

Curly leaf pondweed, for example, is native to Europe, Asia, Africa, and Australia and has spread throughout the

United States. It creates thick mats that restrict swimming and fishing access and reduces resources for native species. The plant is easily transported unseen as small pieces stuck to boats that can quickly regrow in new locations.

To help control ANS, water body users should thoroughly inspect all equipment before leaving the area. Follow "Clean, Drain, Dry" steps to avoid transporting ANS. Resources on ANS in North Dakota, including regulations, sightings and reporting forms, are on the North Dakota Game and Fish Department website at https://gf.nd.gov/ans.



4201 Normandy Street Bismarck, N.D. 58503-1324 701-328-5210 www.deq.nd.gov